



Product Change Notification

PCN Number: QC154901

Notification Date: January 06, 2016

Title: ATMXT336T & ATMXT224T FIRMWARE REVISION CHANGE FROM V3.0.AB TO V3.1.AA

Product Identification:

ATMXT336T-CCU/-CCUR

ATMXT336T-MAU/-MAUR

ATMXT336T-NHU/NHUR

ATMXT224T-CCU/-CCUR

ATMXT224T-MAU/-MAUR

ATMXT224T-NHU/-NHUR

Reason for Change:

☐ Material / Composition

☐ Manufacturing Location

☐ Processing / Manufacturing

☐ Quality / Reliability

☒ Design / Firmware

☐ Logistics

☐ Datasheet

☐ Other:

Change Description:

As part of the continuous improvement process for the ATMXT336T and mXT224T products, performance enhancements were identified and implemented.

Various features were improved. No features were removed.

Firmware changes are detailed in **Attachment 1** below.

The modifications in v3.1.AA are all backwardly compatible with the previous release v3.0.AB.

These enhancements have been implemented by releasing firmware v3.1.AA to production.

Identification Method to Distinguish Change:

Orderable part number has a new SL reference number (General customer release SL numbers shown. Contact your Atmel Sales Representative or Distributor for any customer specific reference numbers):

Current Order Code (V3.0.AB)	New Order Code (V3.1.AA)
MXT336T-CCU/-CCUR; Q1067	MXT336T-CCU/-CCUR; Q1116
MXT336T-MAU/-MAUR; Q1067	MXT336T-MAU/-MAUR; Q1116
MXT336T-NHU/-NHUR; Q1067	MXT336T-NHU/-NHUR; Q1116
MXT224T-CCU/-CCUR; Q1068	MXT224T-CCU/-CCUR; Q1117
MXT224T-MAU/-MAUR; Q1068	MXT224T-MAU/-MAUR; Q1117
MXT224T-NHU/-NHUR; Q1068	MXT224T-NHU/-NHUR; Q1117

Marking of device:

No changes to marking from previous releases. Text remains as shown below:

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Current marking MXT336T-MAU/-MAUR
ATMEL
MXT336T
MAU # (where # = Die Revision)
YYWW-Z (YYWW = Date Code) (where Z = Assembly Location)
LOTCODE

Current marking MXT336T-CCU/-CCUR
AT YYWW# (YYWW = Date Code) (where # = Die Revision)
MXT336T
CCU-Z (where Z = Assembly Location)
LOTCODE

Current marking MXT336T-NHU/-NHUR
ATMEL
MXT336T
NHU
YYWW# Z (YYWW = Date Code) (# = Die Revision) (Z = Assembly Location)
LOTCODE

Current marking MXT224T-MAU/-MAUR
ATMEL
MXT224T
MAU # (where # = Die Revision)
YYWW-Z (YYWW = Date Code) (where Z = Assembly Location)
LOTCODE

Current marking MXT224T-CCU/-CCUR
AT YYWW# (YYWW = Date Code) (where # = Die Revision)
MXT224T
CCU-Z (where Z = Assembly Location)
LOTCODE

Current marking MXT224T-NHU/-NHUR
ATMEL
MXT224T
NHU
YYWW# Z (YYWW = Date Code) (# = Die Revision) (Z = Assembly Location)
LOTCODE

Qualification Data:	☐ Available	☐ Will be available (mm/dd/yr):	☒ Not Applicable
Samples:	☐ Available	☒ Will be available: 01/25/16	☐ Not Applicable

Quantifiable Impact on Quality & Reliability:

No detrimental impact of quality or reliability between these firmware revisions

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Proposed First Ship Date*: April 06, 2016

**The Proposed First Ship Date is the forecasted date that a customer may expect to receive changed product. This is determined by the estimated date of inventory depletion on the PCN issue date. This may be affected by fluctuations in supply and demand. Consequently, although customers should be prepared to receive changed product on this date, Atmel will continue to ship pre-changed product until a time in which inventory has been depleted. This may result in pre-changed product being shipped to customers after this forecasted date.*

Atmel Contact: Please contact your Atmel Sales Representative or Distributor for additional information (when replying via e-mail please include the PCN number in subject line).

This Change Notification is subject to the terms of Atmel's Terms and Conditions of Sale for such products identified herein, which Terms and Conditions remain in full force and effect. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Atmel's Terms and Conditions of Sale for such products, Atmel assumes no liability whatsoever, and Atmel disclaims any express or implied warranty, including liability or warranties relating to fitness for a particular purpose, merchantability, or non-infringement of any patent, copyright or other intellectual property right.

CUSTOMER ACKNOWLEDGEMENT OF RECEIPT: Atmel requests you acknowledge receipt of this PCN. Please complete and email to pcnadm@atmel.com and the Atmel Contact listed above. In your acknowledgement, you can grant approval or request additional information.

Atmel will deem this change accepted unless specific conditions of acceptance are provided in writing within 30 days from the date of this notice.

To be completed by customer:

☐ Approved

☐ Rejected (Please state reason for rejection):

Company:

Name:

Title:

Date:

Email

Address:

Location:

Comments:

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Attachment 1**Overview**

This table provides a summary of the changes related to MXT336T & MXT224T firmware release v3.1.AA from v3.0.AB.

NEW FEATURES	Summary	Backward Compatible?
	The “Self Test T25” object is updated to allow option of running an open pin fault test with externally grounded sensor pins. (For example, testing Flexible Circuit prior to bonding to Touchscreen).	Y
	Added T40.CTRL.EVLEACHCYCLE and T40.NUMTCHBEFSUP for new grip modes to allow touches to reported on the grip suppressed region when they are less than a configurable threshold and stop reporting when they move to the unsuppressed region depending from the user selected mode.	Y
	Added T42.EDGSUPSTR to control the aggressiveness of touch suppression at the edges of the sensor.	Y
	Updated T8.MEASIDLEDEF and T8.MEASACTVDEF to change the types of measurements in idle and active states. Introduced new T72.BGNLRATIOSTAB, T72.BGNLRATIONOIS, T72.BGNLRATIOVNOI and T72.NLRATIO to change the background noise scan rate in various T72 states. Introduced new T111.DCTHRX, T111.DCTHRY and T111.DCIDLESLEWMIN for all T111 instances except for SESC to control the DC measurement in low power idle state.	Y
	Added T80.MOISTVLDTHRSF to modify the threshold used to validate mutual deltas as part of moisture processing to help finger touch performance under very noisy conditions.	Y
	Added T80.TCHIMEASMOV to stop fast moving touches from potentially being marked as moisture due to timing elapsed between different types of touch measurements on a single cycle.	Y
	Added T80.DISATCHCHECK to make sure small touches placed along the same sense line can be boosted correctly on a sensor suffers from strong retransmission problem (Retransmission Level RL > 1.5).	Y
	Introduced new T100.CONFTHR to delay a contacting touch class from being reported as a finger under very noisy conditions.	Y
	Improved movement hysteresis and also added new controls to the T100 Multi Touch Touchscreen object to allow improved filtering of stationary	Y

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	jitter while minimising the impact on moving touches.	
	Adding T111.DCGAINSF which allows the DC level estimate to be tuned so that it matches the Main Selfcap measurement which it is associated with.	Y
REMOVED FEATURES	Summary	Backward Compatible?
	None	
BEHAVIOURAL CHANGES	Summary	Backward Compatible?
	A fix has been made to the T100 JUMPLIMIT feature, which allows smaller values to be used without compromising fast swipes. Smaller values will allow improved separation of fast alternate taps.	Y
	Improved T42.MAXNUMTCHS screen suppression behaviour so only the master touch of two/several merged touches are considered by the logic.	Y
BUG FIXES	Summary	Backward Compatible?
	Fixed the problem that the power-on reset timing could potentially be influenced by different user configuration used.	Y
	The T93 Touch Sequence Logger object is updated so the problem that a subsequent double tap gesture is missed if the number of touch detected by the system on the sensor exceeds the maximum number of touches that t100 is able to report is now fixed.	Y
	Fixed the problem that T93 does not use the correct T100.XRANGE and T100.YRANGE when T100.SWITCHXY is set.	Y
	The T42 TOUCHSUPPRESSION object is updated so the problem of distance suppression being triggered on a large touch that is too close to another large touch is now fixed	Y
	The T100 Multi Touch Touchscreen object is updated so the problem that multiple close taps can join when using low values of (INTTHR – INTTHRYST) is now addressed.	Y